

WHAT IS CLAIMED IS:

1. A desiccant compound able to reversibly absorb a carboxylic acid passivation material, said desiccant compound comprising:
  - a polymer binder selected from the group consisting of polysaccharides, polyamines, polysulfones, and polyamides;
  - a drying agent dispersed in said binder; and
  - said polymer to drying agent weight ratio being 1:2.1 to 1:100.
2. The compound of Claim 1, wherein said drying agent is a molecular sieve.
3. The compound of Claim 1, wherein said drying agent is a zeolite.
4. The compound of Claim 1, said polymer to said drying agent weight ratio being 1:4 to 1:10.
5. The compound of Claim 1, further comprising:
  - a solvent, said polymer and said drying agent to solvent weight ratio being 2:1 to 1:100.
6. The compound of Claim 1, wherein said polymer is a structural polysaccharide.
7. The compound of Claim 1, wherein said polymer is selected from the group consisting of cellulose, hydroxypropylcellulose, chitin, and their functional derivatives.
8. The compound of Claim 1, wherein said polymer is poly(vinylpyrrolidone).
9. The compound of Claim 1, wherein said polymer is selected from the group consisting of poly(2-vinylpyridine), poly(4-vinylpyridine), and copolymers of 2-vinylpyridine and 4-vinylpyridine.
10. The compound of Claim 1, wherein said polymer is poly(p-phenylene sulfone).
11. The compound of Claim 1, further comprising:

a carboxylic acid passivation material, said carboxylic acid passivation material absorbed by said polymer.

12. The compound of Claim 11, wherein said carboxylic acid passivation material is a perfluoroalkanoic acid.
13. The compound of Claim 11, wherein said carboxylic acid passivation material is perfluorodecanoic acid.
14. A device comprising:
  - a micromechanical machine;
  - a package enclosing said micromechanical machine; and
  - a desiccant compound enclosed by said package, said desiccant compound able to reversibly absorb a carboxylic acid passivation material, said desiccant compound comprising:
    - a polymer binder selected from the group consisting of polysaccharides, polyamines, polysulfones, and polyamides;
    - a drying agent dispersed in said binder; and
    - said polymer to drying agent weight ratio being 1:2.1 to 1:100.
15. The device of Claim 14, wherein said drying agent is a molecular sieve.
16. The device of Claim 14, wherein said drying agent is a zeolite.
17. The device of Claim 14, said polymer to said drying agent weight ratio being 1:4 to 1:10.
18. The device of Claim 14, further comprising:
  - a solvent, said polymer and said drying agent to solvent weight ratio being 2:1 to 1:100.
19. The device of Claim 14, wherein said polymer is a structural polysaccharide.

20. The device of Claim 14, wherein said polymer is selected from the group consisting of cellulose, hydroxypropylcellulose, chitin, and their functional derivatives.

21. The device of Claim 14, wherein said polymer is poly(vinylpyrrolidone).

22. The device of Claim 14, wherein said polymer is selected from the group consisting of poly(2-vinylpyridine), poly(4-vinylpyridine), and copolymers of 2-vinylpyridine and 4-vinylpyridine.

23. The device of Claim 14, wherein said polymer is poly(p-phenylene sulfone).

24. The device of Claim 14, further comprising:

a carboxylic acid passivation material, said carboxylic acid passivation material absorbed by said polymer.

25. The device of Claim 24, wherein said carboxylic acid passivation material is a perfluoroalkanoic acid.

26. The device of Claim 24, wherein said carboxylic acid passivation material is perfluorodecanoic acid.

27. A method of applying a desiccant compound able to reversibly absorb a carboxylic acid passivation material, said method comprising the steps of:

mixing said desiccant compound, said mixing comprising mixing:

a polymer binder selected from the group consisting of polysaccharides, polyamines, polysulfones, and polyamides; and

a drying agent dispersed in said binder, said polymer to drying agent weight ratio being 1:2.1 to 1:100;

applying said desiccant compound to a surface; and

curing said desiccant compound.

28. The method of Claim 27, further comprising the step of:  
conditioning said desiccant compound by allowing said desiccant compound to absorb a carboxylic acid passivation material.
29. The method of Claim 27, further comprising the step of:  
conditioning said desiccant compound by allowing said desiccant compound to absorb a perfluoroalkanoic acid passivation material.
30. The method of Claim 27, further comprising the step of:  
conditioning said desiccant compound by allowing said desiccant compound to absorb a perfluorodecanoic acid passivation material.
31. The method of Claim 27, said curing step comprising heating said desiccant compound in the presence of a vacuum.
32. The method of Claim 27, said conditioning step comprising heating said desiccant compound in the presence of a vacuum.
33. The method of Claim 27, said conditioning step comprising the steps of:  
heating said desiccant compound in the presence of a vacuum; and  
exposing said desiccant compound to said carboxylic acid passivation material.
34. The method of Claim 27, said conditioning step comprising the steps of:  
heating said desiccant compound in the presence of a vacuum; and  
depositing said carboxylic acid passivation material in solid form directly in a package; and  
sealing said package; and  
heating said package so that said carboxylic acid passivation material is absorbed into said desiccant compound.

35. The method of Claim 27, said mixing step comprising the step of mixing:
- a polymer binder selected from the group consisting of polysaccharides, polyamines, polysulfones, and polyamides;
  - a drying agent dispersed in said binder, said polymer to drying agent weight ratio being 1:2.1 to 1:100; and
  - a solvent, wherein said polymer and said drying agent to solvent weight ratio is 2:1 to 1:100.
36. The method of Claim 27, said mixing step comprising the step of mixing:
- a polymer binder selected from the group consisting of polysaccharides, polyamines, polysulfones, and polyamides;
  - a drying agent dispersed in said binder, said polymer to drying agent weight ratio being 1:2.1 to 1:100; and
  - a solvent, wherein said polymer and said drying agent to solvent weight ratio is 1:1 to 1:10.
37. The method of Claim 27, said mixing step comprising the step of mixing:
- a structural polysaccharide; and
  - a drying agent dispersed in said binder, said structural polysaccharide to drying agent weight ratio being 1:2.1 to 1:100.
38. The method of Claim 27, said mixing step comprising the step of mixing:
- a polymer selected from the group consisting of cellulose, hydroxypropylcellulose, chitin, and their functional derivatives; and
  - a drying agent dispersed in said binder, said polymer to drying agent weight ratio being 1:2.1 to 1:100.

39. The method of Claim 27, said mixing step comprising the step of mixing:  
poly(vinylpyrrolidone); and  
a drying agent dispersed in said binder, said poly(vinylpyrrolidone) to drying agent weight ratio being 1:2.1 to 1:100.

40. The method of Claim 27, said mixing step comprising the step of mixing:  
a polymer selected from the group consisting of poly(2-vinylpyridine), poly(4-vinylpyridine), and copolymers of 2-vinylpyridine and 4-vinylpyridine; and  
a drying agent dispersed in said binder, said polymer to drying agent weight ratio being 1:2.1 to 1:100.

41. The method of Claim 27, said mixing step comprising the step of mixing:  
poly(p-phenylene sulfone); and  
a drying agent dispersed in said binder, said poly(p-phenylene sulfone) to drying agent weight ratio being 1:2.1 to 1:100.

42.  
41. An image projection system comprising:

a light source providing a beam of light along a light path;  
a micromirror on said light path, said micromirror device selectively reflecting portions of said beam of light in response to image data and control signals, said micromirror device comprising:

a micromechanical machine;  
a package enclosing said micromechanical machine; and  
a desiccant compound enclosed by said package, said desiccant compound able to reversibly absorb a carboxylic acid passivation material, said desiccant compound comprising:

a polymer binder selected from the group consisting of  
polysaccharides, polyamines, polysulfones, and polyamides;

a drying agent dispersed in said binder; and

wherein said polymer to drying agent weight ratio is 1:2.1 to 1:100

projection optics receiving said selectively reflected portions of said beam of light and  
focusing said selectively reflected portions of said beam of light onto an image plane.

43. The image projection system of Claim 42, wherein said drying agent is a molecular sieve.
44. The image projection system of Claim 42, wherein said drying agent is a zeolite.
45. The image projection system of Claim 42, said polymer to said drying agent weight ratio being 1:4 to 1:10.
46. The image projection system of Claim 42, wherein said polymer is a structural polysaccharide.
47. The image projection system of Claim 42, wherein said polymer is selected from the group consisting of cellulose, hydroxypropylcellulose, chitin, and their functional derivatives.
48. The image projection system of Claim 42, wherein said polymer is poly(vinylpyrrolidone).
49. The image projection system of Claim 42, wherein said polymer is selected from the group consisting of poly(2-vinylpyridine), poly(4-vinylpyridine), and copolymers of 2-vinylpyridine and 4-vinylpyridine.
50. The image projection system of Claim 42, wherein said polymer is poly(p-phenylene sulfone).
51. The image projection system of Claim 42, further comprising:

a carboxylic acid passivation material, said carboxylic acid passivation material absorbed by said polymer.

52. The image projection system of Claim 51, wherein said carboxylic acid passivation material is a perfluoroalkanoic acid.
53. The image projection system of Claim 51, wherein said carboxylic acid passivation material is perfluorodecanoic acid.

TI-28505 - Page 19